WHAT IS CLAIMED IS:

1. A mobile communication device comprising:

a plurality of signal detectors, each signal detector configured to provide a respective detected signal having a desired component plus an undesired component; and

a noise suppression unit operatively coupled to the plurality of signal detectors and configured to receive and digitally process the plurality of detected signals from the plurality of signal detectors to provide an output signal having substantially the desired component and large portion of the undesired component removed.

2. The device of claim 1, further comprising:

a first beam forming unit operatively coupled to the plurality of signal detectors and configured to process the plurality of detected signals to form a first signal having the desired component plus a portion of the undesired component; and

a second beam forming unit operatively coupled to the plurality of signal detectors and configured to process the plurality of detected signals to form a second signal having a large portion of the undesired component, and

wherein the noise suppression unit is operatively coupled to the first and second beam forming units and configured to receive and digitally process the first and second signals to provide the output signal.

3. The device of claim 2, wherein the first and second beam forming units and the noise suppression unit are implemented within a digital signal processor (DSP).

4. The device of claim 1, wherein the signal detectors are microphones.

5. The device of claim 4 and comprising two microphones.

6. The device of claim 2, wherein the noise suppression unit is operative to remove the undesired component in the first signal using spectrum modification.

7. The device of claim 2, wherein the noise suppression unit digitally processes the first and second signals in the frequency domain.

8. The device of claim 7, wherein the noise suppression unit includes

a first transformer coupled to the first beam forming unit and configured to receive and transform the first signal into a first transformed signal, and

a second transformer coupled to the second beam forming unit and configured to receive and transform the second signal into a second transformed signal.

9. The device of claim 8, wherein the noise suppression unit further includes

a multiplier configured to receive and scale the first transformed signal with a set of coefficients.

10. The device of claim 9, wherein the set of coefficients are derived based on spectrum subtraction.

11. The device of claim 9, wherein the noise suppression unit further includes

a noise spectrum estimator operative to receive and process the second transformed signal to provide a noise spectrum estimate, and

a gain calculation unit operative to receive the first transformed signal and the noise spectrum estimate and provides the set of coefficients for the multiplier.

12. The device of claim 11, wherein the noise spectrum estimator is operative to provide time-varying noise spectrum estimate.

13. The device of claim 2, wherein the noise suppression unit includes

an activity detector configured to receive the first and second signals and provide a control signal indicative of active time periods whereby the first signal includes predominantly the desired component.

14. The device of claim 13, wherein the first and second beam forming units are adjusted based on the control signal from the activity detector.

15. The device of claim 1 and operative to receive and process far-field signals.

16. The device of claim 1 and operative to receive and process near-field signals.

17. The device of claim 2, wherein each of the first and second beam forming units includes

at least one adaptive filter, each adaptive filter operative to receive and process a signal from a respective signal detector to provide a corresponding filtered signal.

18. The device of claim 17, wherein each adaptive filter implements a least mean square (LMS) algorithm.

19. The device of claim 1, wherein the device is a cellular phone.

20. A wireless communication device comprising:

at least two microphones, each microphone configured to detect and provide a respective signal having a desired component plus an undesired component; and

a signal processor coupled to the at least two microphones and configured to receive and digitally process the detected signals from the microphones to provide an output signal having substantially the desired component and large portion of the undesired component removed.

21. The device of claim 20, wherein the signal processor digitally processes the detected signals in the frequency domain.

22. The device of claim 20, wherein the signal processor digitally processes the detected signals in the time domain.

23. The device of claim 20, wherein the signal processor is operative to remove the undesired component from the output signal using spectrum subtraction.

24. The device of claim 20, wherein the signal processor is further configured to process the detected signals to provide a first signal having the desired

component plus a portion of the undesired component and a second signal having a large portion of the undesired component.

25. The device of claim 20, wherein the signal processor is operative to process far-field signals or near-field signals.

26. The device of claim 20, wherein the microphones are placed close to each other relative to a wave-length of sound and not in an end-fire type of configuration.

27. A method for suppressing noise in a wireless communication device, comprising:

detecting at least two signals via respective signal detectors, wherein each detected signal includes a desired component plus an undesired component;

deriving, from the detected signals, a first signal having substantially the desired component plus a portion of the undesired component;

deriving, from the detected signals, a second signal having a large portion of the undesired component; and

digitally processing the first and second signals to provide an output signal having substantially the desired component and large portion of the undesired component removed.

28. The method of claim 27, wherein the digital processing includes

removing the undesired component from the output signal using spectrum subtraction.

29. The method of claim 28, wherein the digital processing further includes

estimating a noise spectrum of the undesired component based on the second signal,

deriving a set of coefficients based on spectrum subtraction, and

scaling transformed representation of the first signal based on the set of coefficients.

30. The method of claim 29, wherein the digital processing provides time-varying noise spectrum estimate.